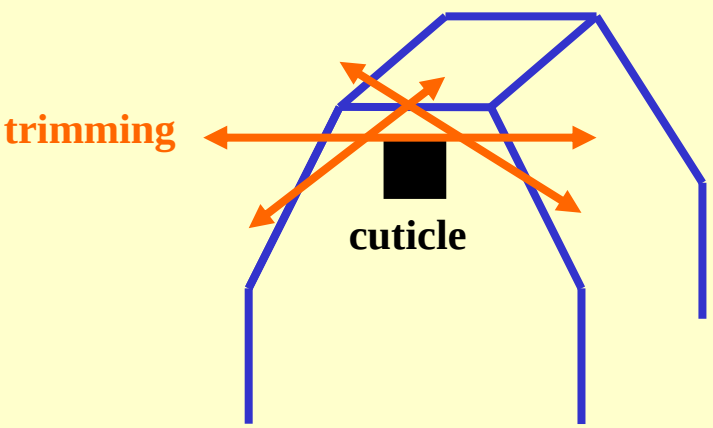
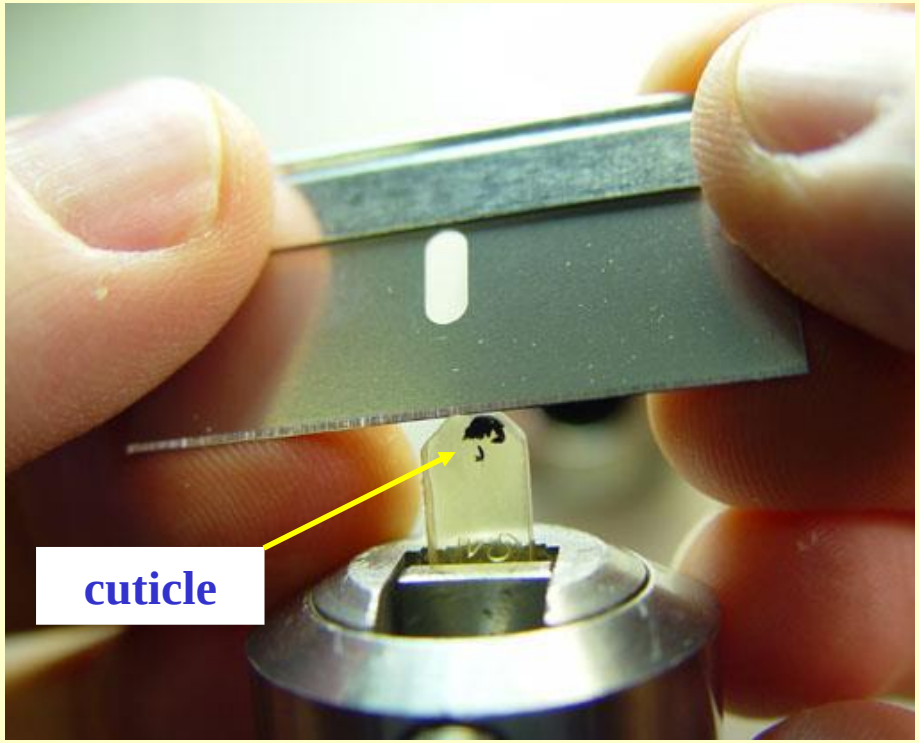
Appendix B. Some steps of the sectioning, staining and observation of the plant cuticles after their embedding in Epon resin

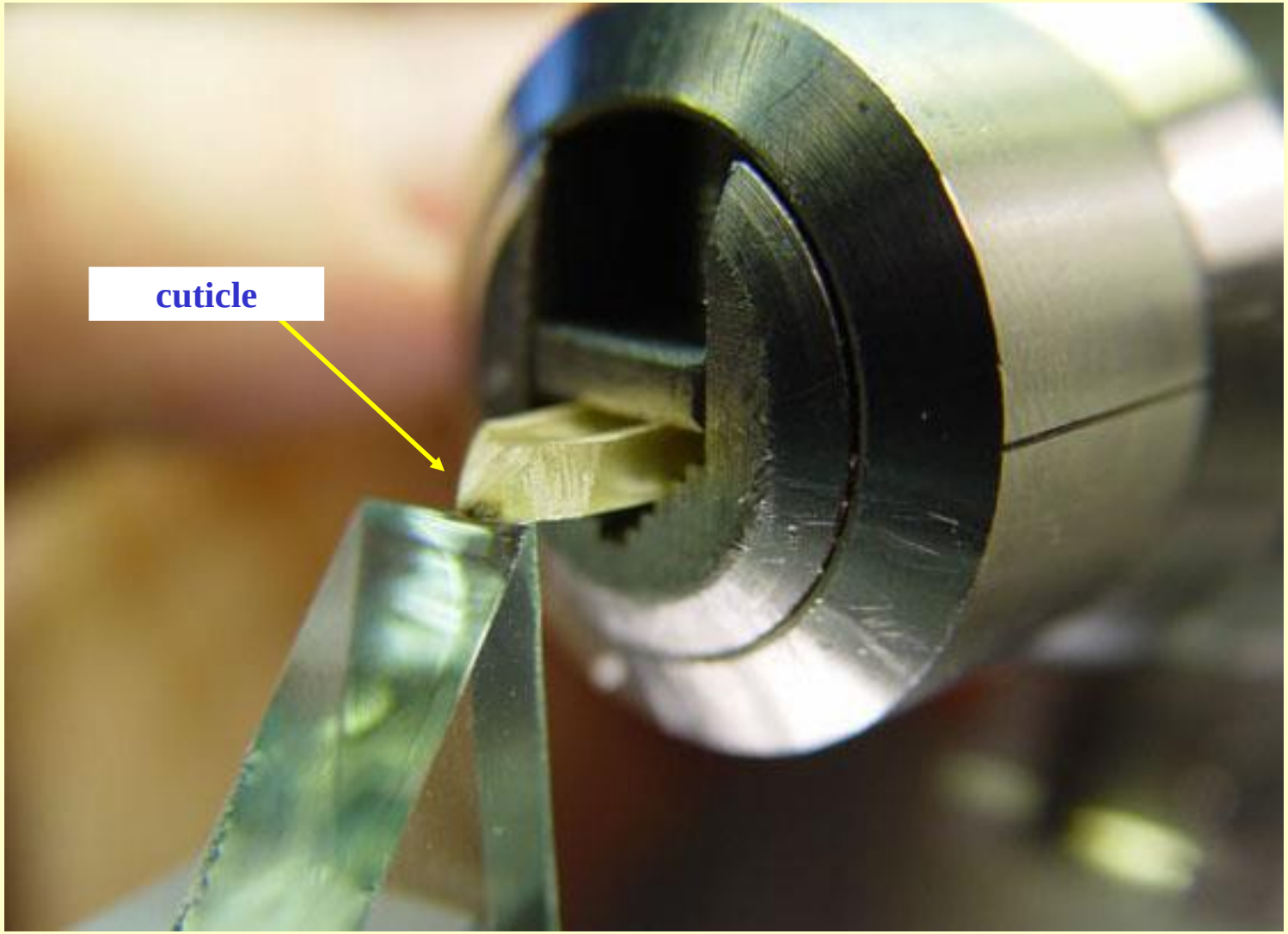
with the help of centre technologique des microstructures (CTμ)
Lyon-1 University, France.

Photos: Nicolas Labert, Pierre Audenis, Eric Le-Roux

trimming the block of resin with razor blade, using WILD ultramicrotome

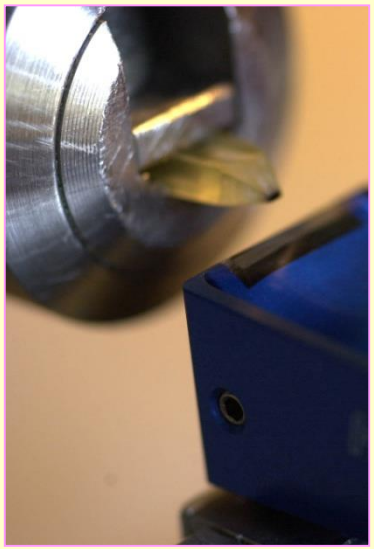


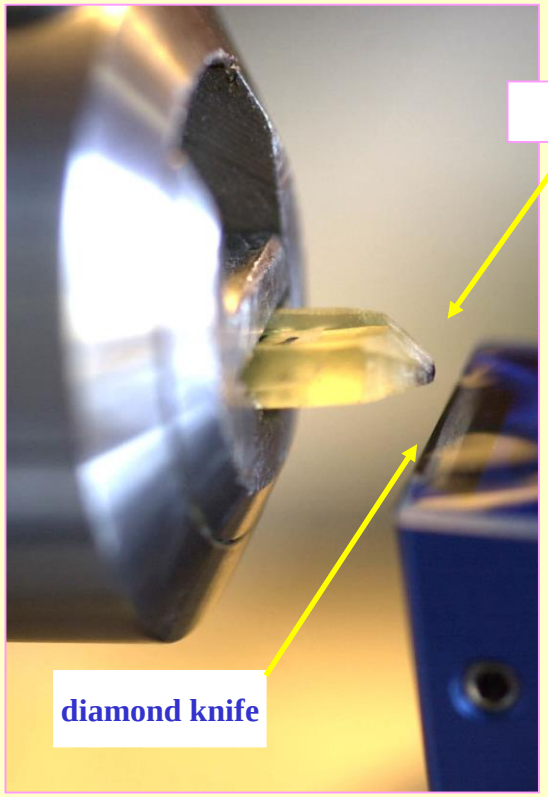


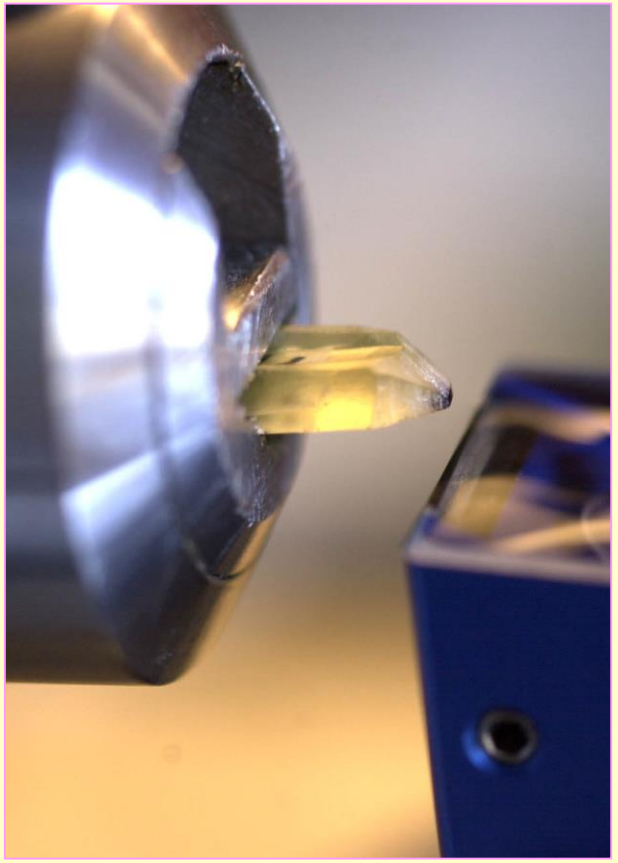


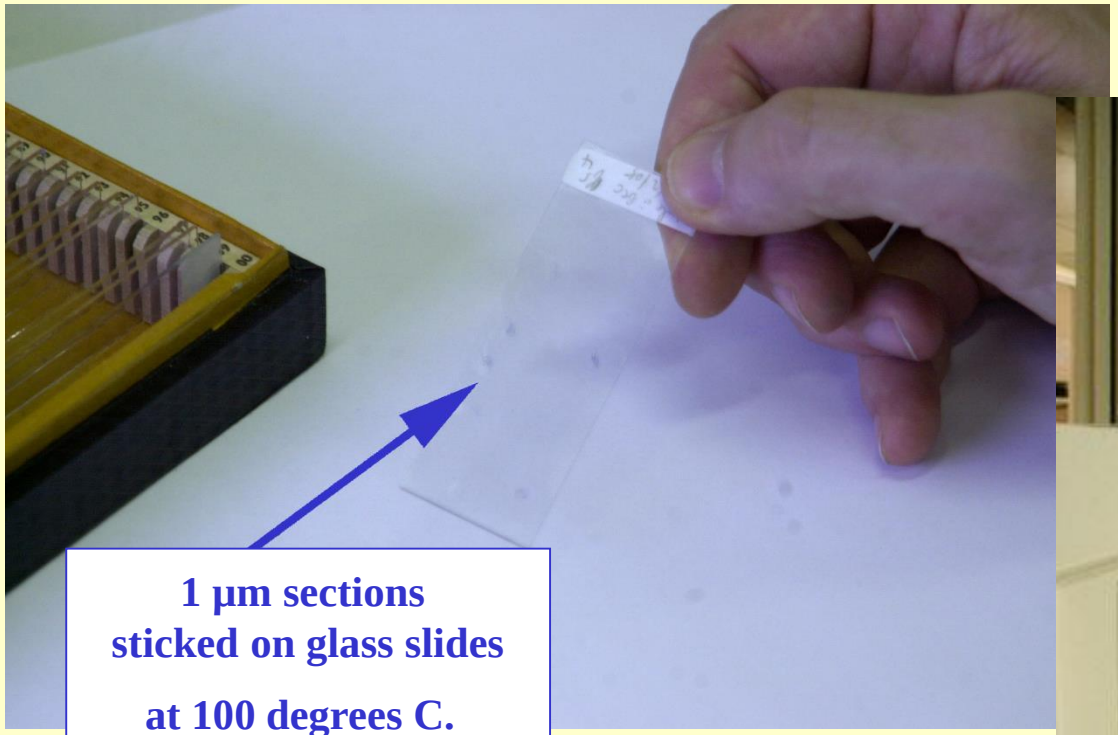
possible use of glass knife technique, to get a very smooth surface

diamond approach for 1 µm sections







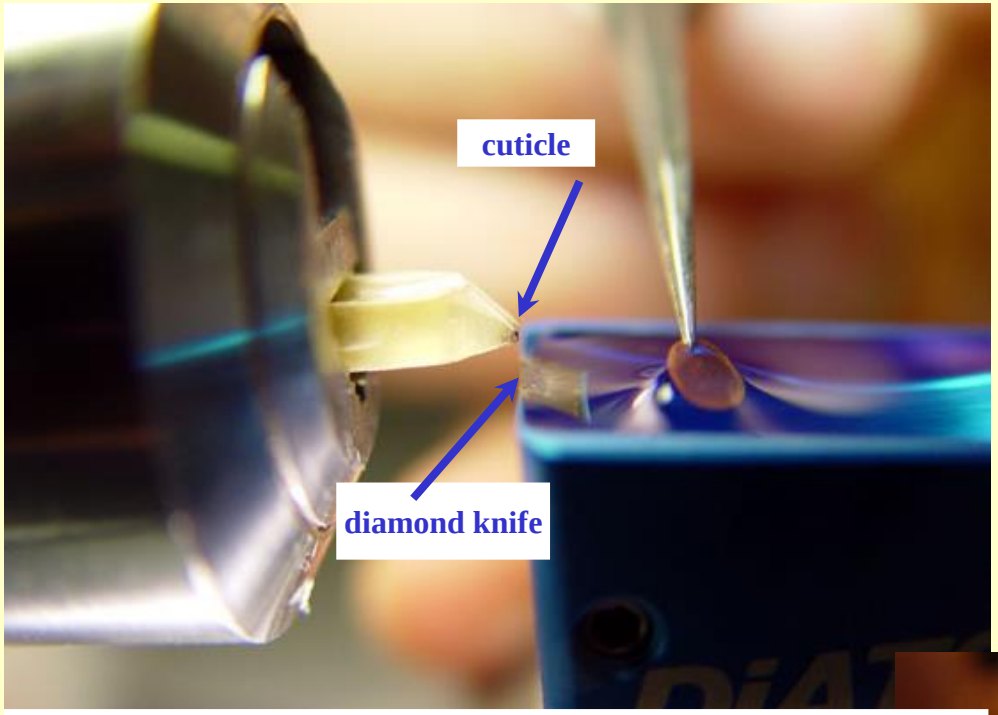


1 µm sections
sticked on glass slides

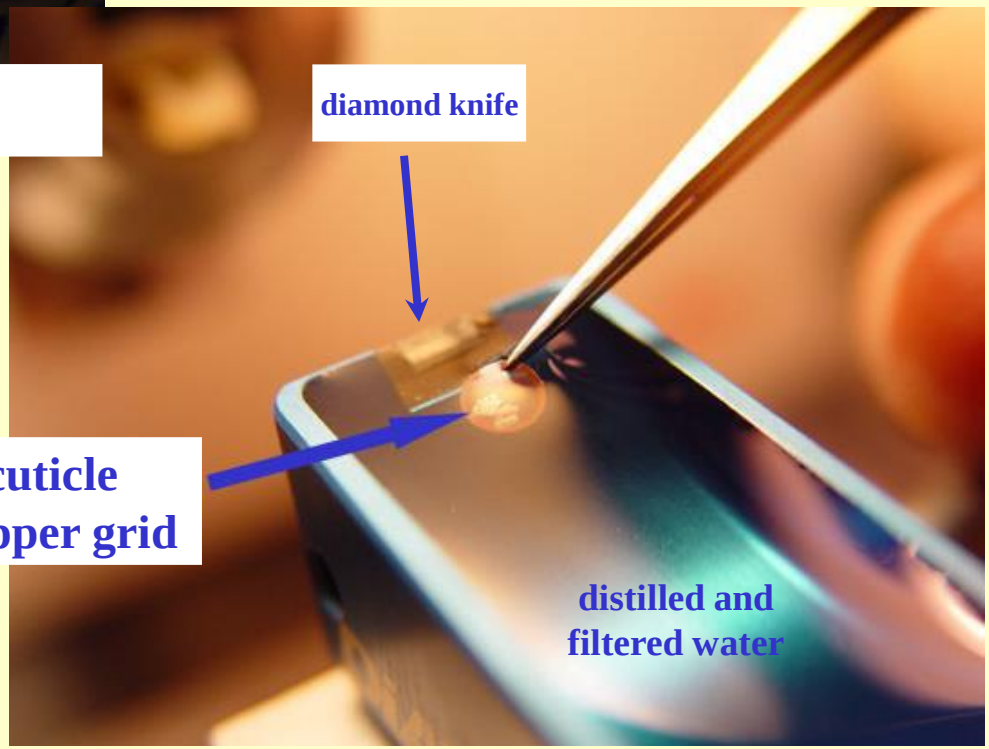
at 100 degrees C.

selection with light microscope

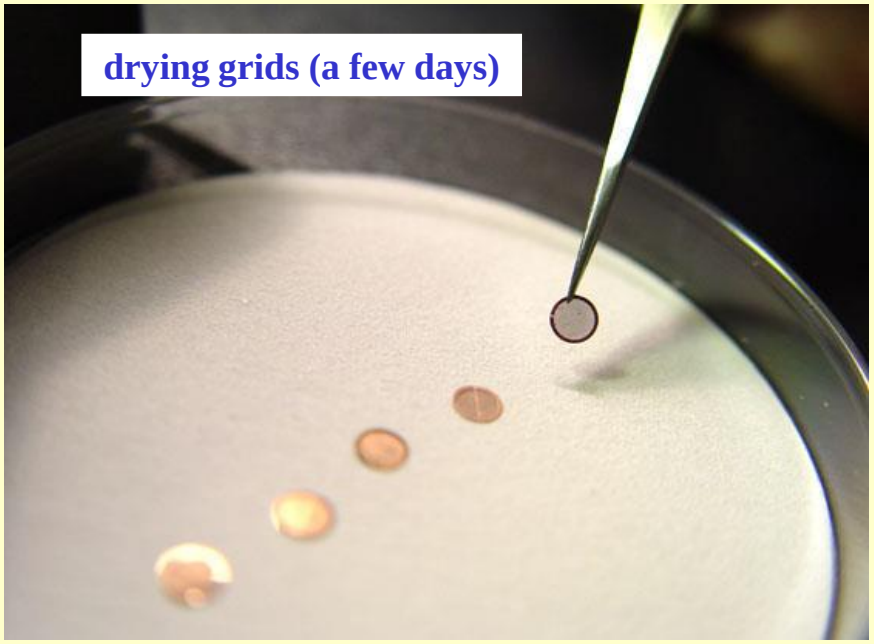
selection of informative zones, for instance stomata



diamond knife for ultra-thin sections (60-70 nm),
example with uncoated copper grids

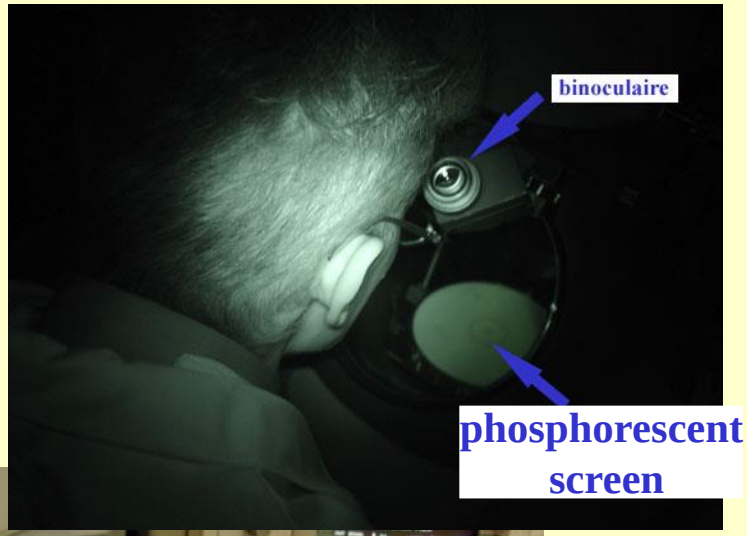


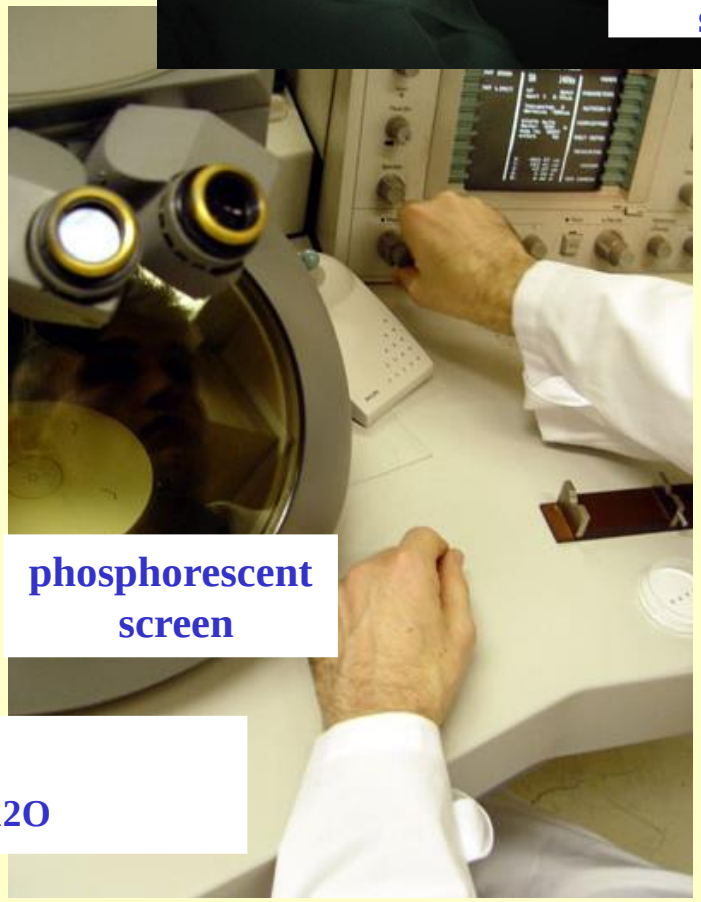
staining of ultra-thin sections (60-70 nm), with uranyl acetate and lead citrate, after drying a few days



staining with uranyl acetate (15 minutes), then drying

staining with lead citrate (20 minutes), then drying





observation of the cuticle sections with the transmission electron microscope Philips CM 12O